

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant	: Marcus Dill, et al.	Art Unit	: 2166
Serial No.	: 10/816,909	Examiner	: Leon J. Harper
Filed	: April 5, 2004	Conf. No.	: 2650
Title	: DEFINING A DATA ANALYSIS PROCESS		

**Mail Stop Appeal Brief - Patents**

Commissioner for Patents

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**BRIEF ON APPEAL**

**(1) Real Party in Interest**

SAP Aktiengesellschaft (SAP AG), the assignee of this application, is the real party in interest.

**(2) Related Appeals and Interferences**

There are no related appeals or interferences.

**(3) Status of Claims**

Claims 1, 3-14, 17-28, and 31-40 are currently pending, of which claims 1, 7, 14, 28, 34, and 35 are independent. Claims 1, 3-14, 17-28, and 31-40 have been rejected and have been appealed, and claims 2, 15, 16, 29, and 30 have been cancelled.

**(4) Status of Amendments**

The claims have not been amended subsequent to the final rejection.

**(5) Summary of Claimed Subject Matter**

Independent claim 1 recites a computer program product tangibly embodied in a storage medium, the computer program product including instructions that when executed generate a graphical user interface on a display device for using a computer to display and modify a data analysis process. Application at page 4, lines 16-17, page 7, lines 15-16, page 26, lines 9-14, page 30, lines 14-15, page 35, lines 20-21, and page 38, line 15 through page 39, line 16. The graphical user interface includes a process list display configured to display identifications of

data analysis processes and receive user input selecting an entry of an identification of a data analysis process. Application at page 4, lines 17-19, page 30, lines 15-21, and page 35, line 21 through page 36, line 4. The graphical user interface also includes a data analysis display configured to display representations of sub-processes included in the data analysis process identified by the selected entry. Application at page 4, lines 19-21, page 26, lines 23-24, page 30, line 22 through page 31, line 9, and page 36, lines 5-10. The displayed representations of sub-processes include a representation of a data mining sub-process for creating a data attribute by performing an analytical process on data from an analytical processing data source, and a representation of at least one of (1) an extraction sub-process for extracting data from a first transactional data source, (2) a transformation sub-process for transforming the extracted data from a data format used by the first transactional data source to a data format used for analytical processing, and (3) a loading sub-process for loading data into the analytical processing data source. Application at page 4, lines 22-30, page 26, lines 24-30, page 31, lines 9-12, page 36, lines 10-13, and page 37, lines 3-11. The displayed representations of sub-processes also include a representation of a deployment sub-process for storing the created data attribute in one of the first transactional data source, a second transactional data source other than the first transactional data source, or a second analytical data source used for analytical processing. Application at page 4, line 29 through page 5, line 4, page 26, line 30 through page 27, line 10, page 31, lines 12-13, page 36, lines 13-14 and 25-30, and page 37, lines 8-11. The data analysis display is configured to display connections between the displayed sub-processes, the connections indicating a sequence with which the displayed sub-processes are performed when performing the data analysis process. Application at page 4, lines 21-22, page 29, lines 20-26, page 36, lines 14-26, and page 38, lines 1-5.

Dependent claim 3 recites that each type of the sub-processes displayed in the data analysis process display is represented by a different shape than shapes representing other types of sub-processes displayed in the analysis sub-process display. Application at page 5, lines 4-6 and page 36, lines 8-14.

Independent claim 7 recites a computer program product tangibly embodied in a storage medium, the computer program product including instructions that when executed generate a graphical user interface on a display device for using a computer to define a data analysis

process. Application at page 4, lines 16-17, page 7, lines 15-16, page 26, lines 9-14, page 30, lines 14-15, page 35, lines 20-21, and page 38, line 15 through page 39, line 16. The graphical user interface includes a sub-processes display configured to receive user input indicating an entry of an identification at least one of (1) an extraction sub-process for extracting data from a data source, (2) a transformation sub-process for transforming the extracted data from a data format used by the data source to a data format used for analytical processing, (3) a loading sub-process for loading data into a data source that is used for analytical processing, (4) a data mining sub-process for creating a data attribute by performing an analytical process on data from the analytical processing data source, and (5) a deployment sub-process for storing a data attribute created in another sub-process. Application at page 5, lines 13-25, page 26, line 23 through page 27, line 10, and page 30, line 22 through page 34, line 27. The sub-processes display also is configured to receive user input indicating an entry identifying a computer program to be associated with each of the identified sub-processes such that execution of the computer program causes the identified sub-process to be performed. Application at page 5, lines 13-25 and page 31, lines 24-30. The graphical user interface further includes a common data display configured to receive user input indicating an entry of selected meta-data elements to be used in the data analysis process wherein each meta-data element is associated with a corresponding data element in the data source and with a corresponding data element in the analytical processing data source. Application at page 5, lines 25-29, page 27, line 11 through page 28, line 12, and page 34, line 28 through page 35, line 19.

Independent claim 14 recites a computer-implemented method for receiving information from a user for use in a data analysis process. Application at page 6, lines 9-10, page 7, lines 15-16, and page 26, lines 11-18. The method includes receiving user input identifying a data analysis process and receiving multiple sub-process user inputs, each sub-process user input identifying a sub-process associated with the data analysis process. Application at page 6, lines 10-11, page 26, lines 23-24, page 30, line 15 through page 31, line 9, and page 35, line 21 through page 36, line 10. At least one of the identified sub-processes is (1) an extraction sub-process for extracting data from a first transactional data source, (2) a transformation sub-process for transforming data extracted from the first transactional data source from a data format used by the first transactional data source to a data format used for analytical processing, (3) a loading

sub-process for loading data into an analytical processing data source that is used for analytical processing, or (4) a data mining sub-process for creating a data attribute by performing an analytical process on data from the analytical processing data source, and at least one of the identified sub-processes is a deployment sub-process for storing a data attribute created in another of the identified sub-processes. Application at page 6, lines 12-20, page 26, line 24 through page 27, line 10, page 31, lines 9-13, page 36, lines 10-14 and 25-30, and page 37, lines 3-11. The method also includes storing the input identifying the data analysis process in association with the inputs identifying the multiple sub-processes for use in the data analysis process. Application at page 6, lines 20-22 and page 30, lines 5-13. The deployment sub-process stores the created data attribute in one of the first transactional data source, a second transactional data source other than the first transactional data source, or a second analytical data source used for analytical processing. Application at page 5, lines 1-5, page 7, lines 9-14, page 26, line 30 through page 27, line 10, and page 36, lines 25-30.

Independent claim 28 recites a computer program product tangibly embodied in a storage medium, the computer program product including instructions that, when executed, receive information from a user for use in a data analysis process. Application at page 6, lines 9-10, page 7, lines 15-16, page 26, lines 11-18, and page 38, line 15 through page 39, line 16. The computer program product is configured to receive user input identifying a data analysis process and receive multiple sub-process user inputs, each sub-process user input identifying a sub-process associated with the data analysis process. Application at page 6, lines 10-11, page 26, lines 23-24, page 30, line 15 through page 31, line 9, and page 35, line 21 through page 36, line 10. At least one of the identified sub-processes is (1) an extraction sub-process for extracting data from a first transactional data source, (2) a transformation sub-process for transforming data extracted from the first transactional data source from a data format used by the first transactional data source to a data format used for analytical processing, (3) a loading sub-process for loading data into an analytical processing data source that is used for analytical processing, or (4) a data mining sub-process for creating a data attribute by performing an analytical process on data from the analytical processing data source, and at least one of the identified sub-processes is a deployment sub-process for storing a data attribute created in another of the identified sub-processes. Application at page 6, lines 12-20, page 26, line 24

through page 27, line 10, page 31, lines 9-13, page 36, lines 10-14 and 25-30, and page 37, lines 3-11. The computer program product also is configured to store the input identifying the data analysis process in association with the inputs identifying the multiple sub-processes for use in the data analysis process. Application at page 6, lines 20-22 and page 30, lines 5-13. The deployment sub-process stores the created data attribute in one of the first transactional data source, a second transactional data source other than the first transactional data source, or a second analytical data source used for analytical processing. Application at page 5, lines 1-5, page 7, lines 9-14, page 26, line 30 through page 27, line 10, and page 36, lines 25-30.

Independent claim 34 recites a system for receiving information from a user for use in a data analysis the system comprising a processor connected to a storage device and one or more input/output devices. Application at page 6, lines 9-10, page 7, lines 15-16, page 26, lines 11-18, and page 38, line 15 through page 39, line 16. The processor is configured to receive user input identifying a data analysis process and receive multiple sub-process user inputs, each sub-process user input identifying a sub-process associated with the data analysis process. Application at page 6, lines 10-11, page 26, lines 23-24, page 30, line 15 through page 31, line 9, and page 35, line 21 through page 36, line 10. At least one of the identified sub-processes is (1) an extraction sub-process for extracting data from a first transactional data source, (2) a transformation sub-process for transforming data extracted from the first transactional data source from a data format used by the first transactional data source to a data format used for analytical processing, (3) a loading sub-process for loading data into an analytical processing data source that is used for analytical processing, or (4) a data mining sub-process for creating a data attribute by performing an analytical process on data from the analytical processing data source, and at least one of the identified sub-processes is a deployment sub-process for storing a data attribute created in another of the identified sub-processes. Application at page 6, lines 12-20, page 26, line 24 through page 27, line 10, page 31, lines 9-13, page 36, lines 10-14 and 25-30, and page 37, lines 3-11. The processor also is configured to store the input identifying the data analysis process in association with the inputs identifying the multiple sub-processes for use in the data analysis process. Application at page 6, lines 20-22 and page 30, lines 5-13. The deployment sub-process stores the created data attribute in one of the first transactional data source, a second transactional data source other than the first transactional data source, or a

second analytical data source used for analytical processing. Application at page 5, lines 1-5, page 7, lines 9-14, page 26, line 30 through page 27, line 10, and page 36, lines 25-30.

Independent claim 35 recites a computer program product tangibly embodied in a storage medium, the computer program product including instructions that when executed generate a graphical user interface on a display device for using a computer to display and modify a data analysis process. Application at page 4, lines 16-17, page 7, lines 15-16, page 26, lines 9-14, page 30, lines 14-15, page 35, lines 20-21, and page 38, line 15 through page 39, line 16. The graphical user interface includes a first graphical icon representing an extraction sub-process for extracting data from a first transactional data source and a second graphical icon representing a loading sub-process for loading data into an analytical processing data source. Application at page 6, lines 12-20, page 26, line 24 through page 27, line 10, page 31, lines 9-13, page 36, lines 10-14 and 25-30, and page 37, lines 3-11. The graphical user interface also includes a third graphical icon representing a data mining sub-process for creating a data attribute by performing an analytical process on data from the analytical processing data source and a fourth graphical icon representing a deployment sub-process for storing the created data attribute. Application at page 6, lines 12-20, page 26, line 24 through page 27, line 10, page 31, lines 9-13, page 36, lines 10-14 and 25-30, and page 37, lines 3-11. The graphical user interface further includes graphical connections between the displayed graphical icons. Application at page 4, lines 21-22, page 29, lines 20-26, page 36, lines 14-26, and page 38, lines 1-5. The graphical connections indicate a sequence with which the sub-processes represented by the displayed graphical icons are performed and information representing the sequence with which the sub-processes represented by the displayed graphical icons are performed is stored in a storage medium for later access and execution of the sub-processes in the represented sequence. Application at page 4, lines 21-22, page 29, lines 20-26, page 30, lines 5-13, page 36, lines 14-26, and page 38, lines 1-5.

Dependent claim 36 recites that the first graphical icon, the second graphical icon, the third graphical icon, and the fourth graphical icon are each displayed as different shapes. Application at page 5, lines 4-6 and page 36, lines 8-14.

**(6) Grounds of Rejection to be Reviewed on Appeal**

Claims 1, 3-14, 17-28, and 31-40 have been rejected under 35 U.S.C. § 102(e) as being anticipated by Kil (U.S. Patent Application Publication No. 2003/0115192).

**(7) Argument**

**a. Claims 1, 3-14, 17-28, and 31-40 are not properly rejected under 35 U.S.C. § 102 as being anticipated Kil.**

Appellant requests reversal of this rejection because Kil fails to describe or suggest the subject matter recited in independent claims 1, 7, 14, 28, 34, and 35, as described more fully below.

**Claims 1, 3-6, 14, 17-28, and 31-34**

Independent claim 1 recites, *inter alia*, a data analysis display configured to display representations of sub-processes included in a data analysis process identified by a selected entry, where the displayed representations of sub-processes include a representation of at least one of (1) an extraction sub-process, (2) a transformation sub-process, and (3) a loading sub-process and a representation of a deployment sub-process for storing a created data attribute in one of a first transactional data source, a second transactional data source other than the first transactional data source, or a second analytical data source used for analytical processing. The data analysis display also is configured to display connections between the displayed sub-processes, the connections indicating a sequence with which the displayed sub-processes are performed when performing the data analysis process. Appellant submits that Kil fails to describe or suggest at least these features.

Specifically, Kil describes a system configured to assist a user in defining a data mining operation. See Kil at Abstract. More specifically, the Kil system is configured to receive, from a user, natural language input describing a goal of a data mining operation and process the natural language input to identify a data mining operation that achieves the described goal. See Kil at paragraphs [0017] and [0018]. To facilitate user entry of the natural language input, the Kil system displays a user interface that includes a text input box configured to enable a user to input natural language describing the goal of the data mining operation. See Kil at paragraph [0047]

and Fig. 2. The Kil user interface also is configured to display information related to data to be analyzed and field/variables to be used in the data mining operation identified based on analysis of the natural language input provided by the user. See Kil at paragraph [0049] and Fig. 2. The Kil user interface, however, does not display representations of sub-processes included in a data analysis process, much less a representation of at least one of (1) an extraction sub-process, (2) a transformation sub-process, and (3) a loading sub-process and a representation of a deployment sub-process for storing a created data attribute in one of a first transactional data source, a second transactional data source other than the first transactional data source, or a second analytical data source used for analytical processing. Rather, the Kil user interface displays a text box for entering natural language input and information (e.g., fields/variables) used in an identified data mining operation, none of which are representations of sub-processes included a data analysis process. Moreover, the Kil system does not contemplate that the data mining operation includes sub-processes including a deployment sub-process for storing a created data attribute in one of a first transactional data source, a second transactional data source other than the first transactional data source, or a second analytical data source used for analytical processing and, as such, cannot display a representation of such sub-processes, much less such a deployment sub-process.

Notably, in the final Office action of June 27, 2008, the Examiner fails to identify any portion of Kil with respect to the features of independent claim 1 related to displaying a representation of at least one of (1) an extraction sub-process, (2) a transformation sub-process, and (3) a loading sub-process and a representation of a deployment sub-process for storing a created data attribute in one of a first transactional data source, a second transactional data source other than the first transactional data source, or a second analytical data source used for analytical processing. See Office action of June 27, 2008 at page 3. Appellant submits that this is improper and that the Examiner has not met his burden in setting forth an anticipation rejection.

Furthermore, Appellant submits that the Kil system fails to display connections between the displayed sub-processes, the connections indicating a sequence with which the displayed sub-processes are performed when performing the data analysis process. The Office action cites Fig. 8 and paragraphs [0017] and [0018] of Kil with respect to this feature. However, Fig. 8 displays a variety of tables illustrating an example of a data set associated with a data mining operation.



See Kil at paragraphs [0087] to [0089] and Fig. 8. Appellant submits that the displayed tables are not displayed connections between displayed sub-processes that indicate a sequence with which the displayed sub-processes are performed. Rather, the tables display data associated with the data mining operation and do not indicate a sequence with which sub-processes are performed.

Moreover, as discussed above, paragraphs [0017] and [0018] of Kil describe a user interface for receiving natural language input describing a goal of a data mining operation and a process of identifying a data mining operation that achieves the described goal. Accordingly, this portion of Kil does not describe or suggest displaying connections between displayed sub-processes, the connections indicating a sequence with which the displayed sub-processes are performed when performing the data analysis process.

Thus, for at least the reasons discussed above, Appellant submits that Kil fails to describe or suggest a data analysis display configured to (1) display representations of sub-processes included in a data analysis process identified by a selected entry, where the displayed representations of sub-processes include a representation of at least one of an extraction sub-process, a transformation sub-process, and a loading sub-process and a representation of a deployment sub-process for storing a created data attribute in one of a first transactional data source, a second transactional data source other than the first transactional data source, or a second analytical data source used for analytical processing, and (2) display connections between the displayed sub-processes, the connections indicating a sequence with which the displayed sub-processes are performed when performing the data analysis process, as recited in independent claim 1.

Independent claims 14, 28, and 34, each recite, *inter alia*, receiving (claim 14) or computer program product (claim 28) or processor (claim 34) configured to receive multiple sub-process user inputs, each sub-process user input identifying a sub-process associated with the data analysis process, where at least one of the identified sub-processes is (1) an extraction sub-process, (2) a transformation sub-process, (3) a loading sub-process, or (4) a data mining sub-process and at least one of the identified sub-processes is a deployment sub-process for storing a data attribute created in another of the identified sub-processes in one of the first transactional data source, a second transactional data source other than the first transactional data source, or a

second analytical data source used for analytical processing. As described above, Kil fails to describe or suggest a data analysis display configured to display representations of sub-processes included in the data analysis process identified by the selected entry, where the displayed representations of sub-processes include a representation of at least one of an extraction sub-process, a transformation sub-process, and a loading sub-process and a representation of a deployment sub-process for storing the created data attribute in one of the first transactional data source, a second transactional data source other than the first transactional data source, or a second analytical data source used for analytical processing. Therefore, Kil also fails to describe or suggest receipt of multiple sub-process user inputs, each sub-process user input identifying a sub-process associated with the data analysis process, where at least one of the identified sub-processes is (1) an extraction sub-process, (2) a transformation sub-process, (3) a loading sub-process, or (4) a data mining sub-process and at least one of the identified sub-processes is a deployment sub-process for storing a data attribute created in another of the identified sub-processes in one of the first transactional data source, a second transactional data source other than the first transactional data source, or a second analytical data source used for analytical processing.

For at least these reasons, Appellant submits that the anticipation rejection of independent claims 1, 14, 28, and 34 over Kil is improper. Therefore, Appellant requests reversal of the rejection of independent claims 1, 14, 28, and 34 and their dependent claims.

### **Dependent Claim 3**

With respect to dependent claim 3, Appellant requests reversal of the rejection of claim 3 at least for the reason of its dependency on claim 1. In addition, Appellant requests reversal of the rejection of claim 3 because Kil fails to describe or suggest the additional subject matter recited in dependent claim 3.

Specifically, dependent claim 3 recites that each type of the sub-processes displayed in the data analysis process display is represented by a different shape than shapes representing other types of sub-processes displayed in the analysis sub-process display. Although Kil describes displaying performance results of a data mining operation, Kil does not describe or suggest that each type of the sub-processes displayed in the data analysis process display is

represented by a different shape than shapes representing other types of sub-processes displayed in the analysis sub-process display. See Kil at paragraphs [0087] to [0090] referring to FIGs. 8 and 9. Thus, Appellant respectfully requests reversal of the rejection of claim 3 for at least these additional reasons.

### **Claims 7-13**

Independent claim 7 recites, *inter alia*, a common data display configured to receive user input indicating an entry of selected meta-data elements to be used in the data analysis process wherein each meta-data element is associated with a corresponding data element in the data source and with a corresponding data element in the analytical processing data source. Appellant submits that Kil fails to describe or suggest at least this feature.

Specifically, the final Office action indicates that claim 7 "is a computer program product substantially corresponding to claim 1 and is thus rejected for the same reasons as claim 1." Office action of June 27, 2008 at page 5. However, claim 7 includes features that are different than features of claim 1 and, therefore, these features have not been addressed in the Office action. Appellant submits that the failure of the Examiner to address the features of independent claim 7 is improper and that the Examiner has not met his burden in setting forth an anticipation rejection.

For example, independent claim 7 recites a common data display configured to receive user input indicating an entry of selected meta-data elements to be used in the data analysis process wherein each meta-data element is associated with a corresponding data element in the data source and with a corresponding data element in the analytical processing data source. This feature is not included in independent claim 1 and, as such, has not been addressed in the final Office action.

In response to similar arguments present in the Amendment filed March 12, 2008, rather than identifying a portion of a cited reference with respect to this feature, the Examiner states:

Examiner is not persuaded. Subsequent to an analysis of the claims it was revealed that a number of limitations recited in the claims belong in the prior art and thus encompassed and/or implicitly disclosed in the reference(s) applied and cited. It is logical for the examiner to focus on the limitations that are "crux of the invention" and not involve a lot of energy and time for the things that are not central to the invention, but peripheral. The examiner is aware of the duties to address each and every element of claims, however, it is also important that a person prosecuting a patent application before the Office, or an stakeholders of patent granting process make effort to

understand the level of one of ordinary skill in the (data processing) art or the level one of skilled in the (data processing) art, as encompassed by the applied and cited references. The administrative convenience derived from such a cooperation between the attorneys and examiners benefits the Office as well the patentee.

In view of the above, the examiner contends that all limitations as recited in the claims have been addressed in this Action.

For the above reasons. Examiner believed that rejection of the last Office action was proper. Office action of June 27, 2008 at pages 12-13.

Appellant submits that the Examiner's refusal to identify a portion of a cited reference with respect to the above-identified feature of claim 7 and yet maintain the rejection is improper. The final Office Action does not provide any legal basis for the positions taken in response to Appellant's arguments. Although Appellant agrees that "cooperation between the attorneys and examiners benefits the Office as well the patentee," such cooperation does not relieve the Examiner of the burden to set forth a proper rejection and address features of a claim that the Appellant has specifically argued are not found in the cited references. Notably, Appellant included the above-identified feature of claim 7 in originally-filed claim 7 in substantially similar form and has presented arguments with respect to the above-identified feature of claim 7 in each of the responses filed throughout prosecution. Accordingly, Appellant is unclear why the Examiner believes the above-identified feature of claim 7 is "peripheral" and not worthy of expenditure of "a lot of energy and time."

Moreover, Appellant submits that the Kil user interface, which displays a text box for entering natural language input and information (e.g., fields/variables) used in an identified data mining operation, fails to include a common data display configured to receive user input indicating an entry of selected meta-data elements to be used in the data analysis process wherein each meta-data element is associated with a corresponding data element in the data source and with a corresponding data element in the analytical processing data source.

Therefore, for at least these reasons, Appellant submits that the anticipation rejection of independent claim 7 over Kil is improper. Therefore, Appellant requests reversal of the rejection of independent claim 7 and its dependent claims.

### **Claims 35-39**

Independent claim 35 recites a graphical user interface that includes, *inter alia*, first through fourth graphical icons representing sub-processes included in a data analysis process, and graphical connections between the displayed graphical icons, the graphical connections indicating a sequence with which the sub-processes represented by the displayed graphical icons are performed. Appellant submits that Kil fails to describe or suggest at least these features.

Similar to the final Office Action's treatment of independent claim 7, the final Office action indicates that claims 35-40 "are computer program product claims substantially corresponding to claims 1, 3-14, 17-28, 31-34 and are thus rejected for the same reasons as set forth in the rejection of claims 1, 3-14, 17-28, 31-34." Office action of June 27, 2008 at page 9. However, claim 35 includes features that are different than features of claims 1, 3-14, 17-28, 31-34 and, therefore, these features have not been addressed in the Office action. Appellant submits that the failure of the Examiner to address the features of independent claim 35 is improper and that the Examiner has not met his burden in setting forth an anticipation rejection.

For example, independent claim 35 recites a graphical user interface that includes a first graphical icon representing an extraction sub-process, a second graphical icon representing a loading sub-process, a third graphical icon representing a data mining sub-process, a fourth graphical icon representing a deployment sub-process, and graphical connections between the displayed graphical icons. Appellant submits that claims 1, 3-14, 17-28, 31-34 do not include a graphical user interface with the combination of four graphical icons and graphical connections between the displayed graphical icons recited in independent claim 35 and, as such, these features have not been addressed in the final Office action.

Moreover, Appellant submits that Kil, which describes a user interface that includes a text box for entering natural language input and information (e.g., fields/variables) used in an identified data mining operation, fails to describe or suggest a graphical user interface that includes a first graphical icon representing an extraction sub-process, a second graphical icon representing a loading sub-process, a third graphical icon representing a data mining sub-process, a fourth graphical icon representing a deployment sub-process, and graphical connections between the displayed graphical icons, the graphical connections indicating a sequence with which the sub-processes represented by the displayed graphical icons are performed.

Therefore, for at least these reasons, Appellant submits that the anticipation rejection of independent claim 35 over Kil is improper. Therefore, Appellant requests reversal of the rejection of independent claim 35 and its dependent claims.

### **Dependent Claim 36**

With respect to dependent claim 36, Appellant requests reversal of the rejection of claim 36 at least for the reason of its dependency on claim 35. In addition, Appellant requests reversal of the rejection of claim 36 because Kil fails to describe or suggest the additional subject matter recited in dependent claim 36.

Specifically, dependent claim 36 recites that the first graphical icon, the second graphical icon, the third graphical icon, and the fourth graphical icon are each displayed as different shapes. Although Kil describes displaying performance results of a data mining operation, Kil does not describe or suggest that a first graphical icon, a second graphical icon, a third graphical icon, and a fourth graphical icon are each displayed as different shapes. See Kil at paragraphs [0087] to [0090] referring to FIGs. 8 and 9. Thus, Appellant respectfully requests reversal of the rejection of claim 36 for at least these additional reasons.

### **b. Conclusion and Relief**

Accordingly, for the foregoing reasons, the Appellant requests reversal of the pending rejections of claims 1, 3-14, 17-28, and 31-40. In accordance with Appellant's Notice of Appeal filed September 26, 2008, Appellant submits this Appeal Brief.

Pursuant to 37 CFR §1.136, Appellant hereby petitions that the period for response be extended for one month to and including December 26, 2008.

The fee in the amount of \$670.00 in payment of the brief fee (\$540) and the one-month extension of time fee (\$130) is being paid concurrently herewith on the Electronic Filing System (EFS) by way of Deposit Account authorization.

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US

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Respectfully submitted,

Date: December 22, 2008

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### **Appendix of Claims**

1. (Previously Presented) A computer program product tangibly embodied in a storage medium, the computer program product including instructions that when executed generate a graphical user interface on a display device for using a computer to display and modify a data analysis process, the graphical user interface comprising:

a process list display configured to:

display identifications of data analysis processes, and

receive user input selecting an entry of an identification of a data analysis process;

and

a data analysis display configured to:

display representations of sub-processes included in the data analysis process

identified by the selected entry, the displayed representations of sub-processes including:

a representation of a data mining sub-process for creating a data attribute by performing an analytical process on data from an analytical processing data source,

a representation of at least one of (1) an extraction sub-process for extracting data from a first transactional data source, (2) a transformation sub-process for transforming the extracted data from a data format used by the first transactional data source to a data format used for analytical processing, and (3) a loading sub-process for loading data into the analytical processing data source, and

a representation of a deployment sub-process for storing the created data attribute in one of the first transactional data source, a second transactional data source other than the first transactional data source, or a second analytical data source used for analytical processing, and

display connections between the displayed sub-processes, the connections indicating a sequence with which the displayed sub-processes are performed when performing the data analysis process.

2. (Cancelled)



3. (Original) The computer program product of claim 1 wherein each type of the sub-processes displayed in the data analysis process display is represented by a different shape than shapes representing other types of sub-processes displayed in the analysis sub-process display.

4. (Previously Presented) The computer program product of claim 1 wherein the graphical user interface further comprises controls configured to add types of sub-processes to the data analysis process displayed in the data analysis display.

5. (Previously Presented) The computer program product of claim 4 wherein the controls comprise one or more of a control configured to add an extraction sub-process, a control configured to add a load sub-process, a control configured to add an analysis sub-process, and a control configured to add a deployment sub-process.

6. (Previously Presented) The computer program product of claim 1 wherein the graphical user interface further comprises a control configured to display information about status of the data analysis process.

7. (Previously Presented) A computer program product tangibly embodied in a storage medium, the computer program product including instructions that when executed generate a graphical user interface on a display device for using a computer to define a data analysis process, the graphical user interface comprising:

a sub-processes display configured to:

receive user input indicating an entry of an identification at least one of (1) an extraction sub-process for extracting data from a data source, (2) a transformation sub-process for transforming the extracted data from a data format used by the data source to a data format used for analytical processing, (3) a loading sub-process for loading data into a data source that is used for analytical processing, (4) a data mining sub-process for creating a data attribute by performing an analytical process on data from the analytical

processing data source, and (5) a deployment sub-process for storing a data attribute created in another sub-process, and

receive user input indicating an entry identifying a computer program to be associated with each of the identified sub-processes such that execution of the computer program causes the identified sub-process to be performed; and

a common data display configured to receive user input indicating an entry of selected meta-data elements to be used in the data analysis process wherein each meta-data element is associated with a corresponding data element in the data source and with a corresponding data element in the analytical processing data source.

8. (Original) The computer program product of claim 7 wherein:  
the data source is a transactional data source, and  
the deployment sub-process stores the created data attribute in the transactional data source.

9. (Original) The computer program product of claim 8 wherein the deployment sub-process stores the created data attribute in one of the data source, a second transactional data store other than the transactional data source, or a second analytical data store other than the analytical data used for the data mining sub-process.

10. (Previously Presented) The computer program product of claim 7 wherein the graphical user interface is configured to receive user input defining how a particular error is to be processed during the data analysis process.

11. (Previously Presented) The computer program product of claim 7 wherein the graphical user interface is configured to receive user input identifying a computing device or a component of a computing device to be used during the execution of one of the identified sub-processes.

12. (Previously Presented) The computer program product of claim 7 wherein the graphical user interface is configured to receive user input identifying an order in which each of the identified sub-processes are to be performed when performing the data analysis process.

13. (Previously Presented) The computer program product of claim 7 wherein the graphical user interface is configured to receive user input identifying when the data analysis process is to be initiated.

14. (Previously Presented) A computer-implemented method for receiving information from a user for use in a data analysis process, the method comprising:  
receiving user input identifying a data analysis process;  
receiving multiple sub-process user inputs, each sub-process user input identifying a sub-process associated with the data analysis process, wherein:

at least one of the identified sub-processes is (1) an extraction sub-process for extracting data from a first transactional data source, (2) a transformation sub-process for transforming data extracted from the first transactional data source from a data format used by the first transactional data source to a data format used for analytical processing, (3) a loading sub-process for loading data into an analytical processing data source that is used for analytical processing, or (4) a data mining sub-process for creating a data attribute by performing an analytical process on data from the analytical processing data source, and

at least one of the identified sub-processes is a deployment sub-process for storing a data attribute created in another of the identified sub-processes; and

storing the input identifying the data analysis process in association with the inputs identifying the multiple sub-processes for use in the data analysis process, wherein

the deployment sub-process stores the created data attribute in one of the first transactional data source, a second transactional data source other than the first transactional data source, or a second analytical data source used for analytical processing.

15-16. (Cancelled)

17. (Previously Presented) The method of claim 14 wherein one of the sub-process user inputs comprises a sub-process user input identifying a computer program that causes the identified sub-process to be performed.

18. (Previously Presented) The method of claim 14 further comprising receiving user inputs of meta-data elements to be used in the data analysis process wherein each meta-data element is associated with 1) a corresponding data element in the first transactional data source, 2) a corresponding data element in the analytical processing data source, or 3) both a corresponding data element in one of the first and second transactional data sources and a corresponding data element in the analytical processing data source.

19. (Original) The method of claim 14 wherein each of the multiple sub-processes use a common message format.

20. (Previously Presented) The method of claim 14 further comprising receiving user input defining how a particular error is to be processed during the data analysis process.

21. (Previously Presented) The method of claim 14 further comprising receiving user input identifying a computing device or a component of a computing device to be used during the execution of one of the multiple sub-processes.

22. (Previously Presented) The method of claim 14 further comprising receiving user input identifying an order in which the multiple sub-processes are to be performed when performing the data analysis process.

23. (Previously Presented) The method of claim 14 further comprising receiving user input identifying when the data analysis process is to be initiated.

24. (Previously Presented) The method of claim 14 wherein the deployment sub-process comprises a first deployment sub-process for storing a data attribute created in another of

the identified sub-processes in a first data store and the multiple identified sub-processes further include a second deployment sub-process for storing the data attribute in a second data store.

25. (Original) The method of claim 24 wherein the first data store is the same as the second data store.

26. (Original) The method of claim 24 wherein the first data store is different from the second data store.

27. (Original) The method of claim 26 wherein the first data store comprises a transactional data store and the second data store comprises an analytical data store.

28. (Previously Presented) A computer program product tangibly embodied in a storage medium, the computer program product including instructions that, when executed, receive information from a user for use in a data analysis process, and the computer program product being configured to

receive user input identifying a data analysis process;

receive multiple sub-process user inputs, each sub-process user input identifying a sub-process associated with the data analysis process, wherein:

at least one of the identified sub-processes is (1) an extraction sub-process for extracting data from a first transactional data source, (2) a transformation sub-process for transforming data extracted from the first transactional data source from a data format used by the first transactional data source to a data format used for analytical processing, (3) a loading sub-process for loading data into an analytical processing data source that is used for analytical processing, or (4) a data mining sub-process for creating a data attribute by performing an analytical process on data from the analytical processing data source, and

at least one of the identified sub-processes is a deployment sub-process for storing a data attribute created in another of the identified sub-processes; and

store the input identifying the data analysis process in association with the inputs identifying the multiple sub-processes for use in the data analysis process, wherein

the deployment sub-process stores the created data attribute in one of the first transactional data source, a second transactional data source other than the first transactional data source, or a second analytical data source used for analytical processing.

29-30. (Cancelled)

31. (Previously Presented) The computer program product of claim 28 wherein one of the sub-process inputs comprises a sub-process user input identifying a computer program that causes the identified sub-process to be performed.

32. (Previously Presented) The computer program product of claim 28 further configured to receive user inputs of meta-data elements to be used in the data analysis process wherein each meta-data element is associated with 1) a corresponding data element in the first transactional data source, 2) a corresponding data element in the analytical processing data source, or 3) both a corresponding data element in one of the first and second transactional data sources and a corresponding data element in the analytical process data source.

33. (Previously Presented) The computer program product of claim 28 wherein the deployment sub-process comprises a first deployment sub-process for storing a data attribute created in another of the identified sub-processes in a first data store and the multiple identified sub-processes further include a second deployment sub-process for storing the data attribute in a second data store.

34. (Previously Presented) A system for receiving information from a user for use in a data analysis the system comprising a processor connected to a storage device and one or more input/output devices, wherein the processor is configured to:

receive user input identifying a data analysis process;

receive multiple sub-process user inputs, each sub-process user input identifying a sub-process associated with the data analysis process, wherein:

at least one of the identified sub-processes is (1) an extraction sub-process for extracting data from a first transactional data source, (2) a transformation sub-process for transforming data extracted from the first transactional data source from a data format used by the first transactional data source to a data format used for analytical processing, (3) a loading sub-process for loading data into an analytical processing data source that is used for analytical processing, or (4) a data mining sub-process for creating a data attribute by performing an analytical process on data from the analytical processing data source, and

at least one of the identified sub-processes is a deployment sub-process for storing a data attribute created in another of the identified sub-processes; and

store the input identifying the data analysis process in association with the inputs identifying the multiple sub-processes for use in the data analysis process, wherein the deployment sub-process stores the created data attribute in one of the first transactional data source, a second transactional data source other than the first transactional data source, or a second analytical data source used for analytical processing.

35. (Previously Pending) A computer program product tangibly embodied in a storage medium, the computer program product including instructions that when executed generate a graphical user interface on a display device for using a computer to display and modify a data analysis process, the graphical user interface comprising:

a first graphical icon representing an extraction sub-process for extracting data from a first transactional data source;

a second graphical icon representing a loading sub-process for loading data into an analytical processing data source;

a third graphical icon representing a data mining sub-process for creating a data attribute by performing an analytical process on data from the analytical processing data source;

a fourth graphical icon representing a deployment sub-process for storing the created data attribute; and

graphical connections between the displayed graphical icons, the graphical connections indicating a sequence with which the sub-processes represented by the displayed graphical icons are performed,

wherein information representing the sequence with which the sub-processes represented by the displayed graphical icons are performed is stored in a storage medium for later access and execution of the sub-processes in the represented sequence.

36. (Previously Pending) The computer program product of claim 35 wherein the first graphical icon, the second graphical icon, the third graphical icon, and the fourth graphical icon are each displayed as different shapes.

37. (Previously Pending) The computer program product of claim 35, wherein the extraction sub-process is a first extraction sub-process, the loading sub-process is a first loading sub-process, and the deployment sub-process is a first deployment sub-process, further comprising:

a fifth graphical icon representing a second extraction sub-process for extracting data from a first transactional data source;

a sixth graphical icon representing a second loading sub-process for loading data into an analytical processing data source; and

a seventh graphical icon representing a second deployment sub-process for storing the created data attribute.

38. (Previously Pending) The computer program product of claim 37 wherein:  
the graphical connections connect the second and sixth graphical icons to the third graphical icon to indicate that a flow of the data analysis process from each of the first and second loading sub-processes leads to the data mining sub-process; and

the graphical connections connect the third graphical icon to the fourth and seventh graphical icons to indicate that the flow of the data analysis process from the data mining sub-process leads to each of the first and second deployment sub-processes.

39. (Previously Pending) The computer program product of claim 35 further comprising a fifth graphical icon representing a transformation sub-process for transforming the



extracted data from a data format used by the first transactional data source to a data format used for analytical processing.

40. (Previously Pending) The computer program product of claim 35 wherein the fourth graphical icon represents a deployment sub-process for storing the created data attribute in one of the first transactional data source, a second transactional data source other than the first transactional data source, or a second analytical data source used for analytical processing.

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### **Evidence Appendix**

NONE.

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### **Related Proceedings Appendix**

NONE.